

## Two New Rhopalocera from Central Tibet

(Lepidoptera: Rhopalocera)

by

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### Abstract

From Central Tibet, *Argestina waltoni pseudonitida* subspec. nov. and *Polyommatus sarta laziensis* subspec. nov. are described. *A. waltoni pseudonitida* can be distinguished from *A. waltoni waltoni* chiefly by the forewing ocellus smaller and subbasal, discal and submarginal lines on the underside hindwing very obscure. *P. sarta laziensis* can be distinguished from all the other known subspecies chiefly by the black spots and white rings to black spots on the underside very much smaller.

### Satyridae

#### *Argestina waltoni pseudonitida* subspec. nov.

*A. waltoni* ELWES, 1906 was originally described from Gyangtse, S. Tibet, also known from Lhasa, Tsedang, Naidong, Zhanang and Jiacha. No further subspecies has been described.

The new subspecies from Lazi and Sangsang can be easily distinguished from ssp. *waltoni* by the following characters.

#### Diagnosis

Both male and female:

- 1) On the upperside forewing, the subapical ocellus is constantly smaller than that of ssp. *waltoni*, often very minute or absent.
- 2) On the underside forewing, the discal reddish line is remote from the ocellus, not close to the ocellus as in ssp. *waltoni*.
- 3) On the underside hindwing, the subbasal, discal and submarginal lines are very obscure, usually only the discal line is traceable, whereas in ssp. *waltoni*, all the lines are heavily marked with blackish.

#### Remarks

*A. waltoni pseudonitida* shows a curious resemblance to *A. nitida* RILEY, 1924 from Gyangtse, but differs from the latter in having the male genitalia different and the modified scales on the discal area of upperside forewing prominent.

*A. waltoni pseudonitida* agrees with *A. waltoni waltoni* in male genitalia.

*A. waltoni* is single-brooded in nature, it occurs in May and June in all the known localities.

#### Distribution

While *A. waltoni waltoni* is distributed to the east of Xigaze, *A. w. pseudonitida* is distributed to the west of Xigaze.

#### Type data

Holotype ♂, LF: 20 mm, Lazi, 3700 m, June 10th 1993.

Allotype ♀, LF: 20.5 mm, same data as holotype.

Paratypes: 1 ♂, LF: 19 mm, Cuola Pass, 4300 m, June 9th 1993; 4 ♂♂, LF: 19 mm, Sangsang, 4000 m, June 12th 1993. 1 ♀, LF: 19 mm, Sangsang.

All types deposited in the Biological Laboratory of Qingdao Education College, China.

## Lycaenidae

### *Polyommatus sarta laziensis* subsp. nov.

#### Diagnosis

*Polyommatus sarta* ALPHERAKY, 1881 was originally described from the Alexander Mts., three other subspecies have been described: ssp. *sartoides* SWINHOE, 1910 from Chitral, ssp. *rupala* TYTLER, 1926 from Rupala of Astor, Gilgit agency, and ssp. *gooraisica* TYTLER, 1926 from Gurais, N. W. India. The new subspecies from Lazi, central Tibet can be easily distinguished from all the known subspecies by the following characters:

- 1) Male: ground colour of upperside is bright blue as well as in ssp. *sarta* and ssp. *sartoides*, not powdered with dark scales as in ssp. *rupala* and ssp. *gooraisica*.
- 2) Female: on the upperside, the reddish submarginal spots are absent or narrowly marked as well as in ssp. *sarta* and ssp. *rupala*, much narrower than in ssp. *sartoides*.
- 3) Both male and female: On the underside, all the black spots are very much smaller than in all the other subspecies, similarly all the white rings to the black spots are much narrower than in all the other subspecies (this character makes ssp. *laziensis* a very distinct subspecies from all the known subspecies of *P. sarta*).

#### Remarks

*Polyommatus sarta* is very distinct from all the other species of *Polyommatus*. It is characterized by the forewing subbasal spots usually absent, the hindwing discocellular spot broadly white with the black pupil very minute, and the underside ground colour reddish in both male and female. I noticed that *P. aloisi* BALINT, 1988 from Mongolia most likely was a subspecies of *P. sarta*.

In Tibet there are 6 other taxa of *Polyommatus* known: *P. stoliczkana ariana* MOORE, 1865 from S. W. Tibet, *P. stoliczkana arene* FAWCETT, 1904 from the south Tibet-Nepal border, *P. stoliczkana everesti* RILEY, 1924 from the Mt. Everest, *P. venus lhasana* MURAYAMA, 1983 from Central Tibet, *P. erotides sichuanicus* MURAYAMA, 1983 from East Tibet, and *P. akmeicius* BALINT, 1993 from East Tibet. All these taxa can easily distinguished from *P. sarta laziensis* by the sexual dimorphism well pronounced in the underside ground colour (whereas the males are greyish, the females are reddish or brownish).

LEE (1982: 150) reported two other taxa of *Polyommatus* from Tibet: *P. icarus* from Lhasa and *P. eros* from East Tibet. But his "*P. icarus*" was the misidentification of *P. venus lhasana* and his "*P. eros*" was the misidentification of *P. erotides sichuanicus*.

*Polyommatus erotides sichuanicus* was originally described from Tatsienlu and Qingchenshan, Sichuan as a subspecies of *P. eros*. I examined the male genitalia of this taxon, found that it agreed very well with *P. erotides* STAUDINGER from Siberia and North China, but did nothing with *P. eros* from Europe and West Asia. The specimens of this taxa from east Tibet agree well with the specimens from Sichuan.

*P. akmeicius* was originally described from N. W. Yunnan. The specimens from Pome, East Tibet agree very well with the type specimens from Yunnan.

There is only very slight difference in male genitalia among the species of *Polyommatus*, so the external features often give more important information to the specific classification of *Polyommatus*. Based upon the examination of a large series of specimens, the following slight difference could be found among the Tibetan species of *Polyommatus*: 1) *P. stoliczkana* has falces more stout and shorter than in all the other species, the inner process of falces reaching the tip of labides in dorsal view, and the apical hook of valva extending beyond the inner distal process of valva. 2) *P. erotides* has the distal process of valva constantly shorter than in all of the other *Polyommatus* species in Tibet. 3) *P. akmeicius* has the valva constantly broader than in all the other species and the distal process of valva longer. 4) *P. sarta laziensis* has the valva narrower than that of *P. akmeicius* but broader than that of *P. venus*.

### Distribution

This new subspecies is distributed in Central Tibet, whereas all the other subspecies are known from N. W. Himalayas and Central Asia.

### Type data

Holotype ♂, LF: 14.5 mm; Allotype ♀, LF: 14.5 mm. Paratypes: 1 ♂, LF: 16.5 mm; 1 ♂, LF: 15 mm; 1 ♀, LF: 15 mm. Lazi, Central Tibet, 4500 m, June 15th 1993.

All types deposited in the Biological Laboratory of Qingdao Education College, China.

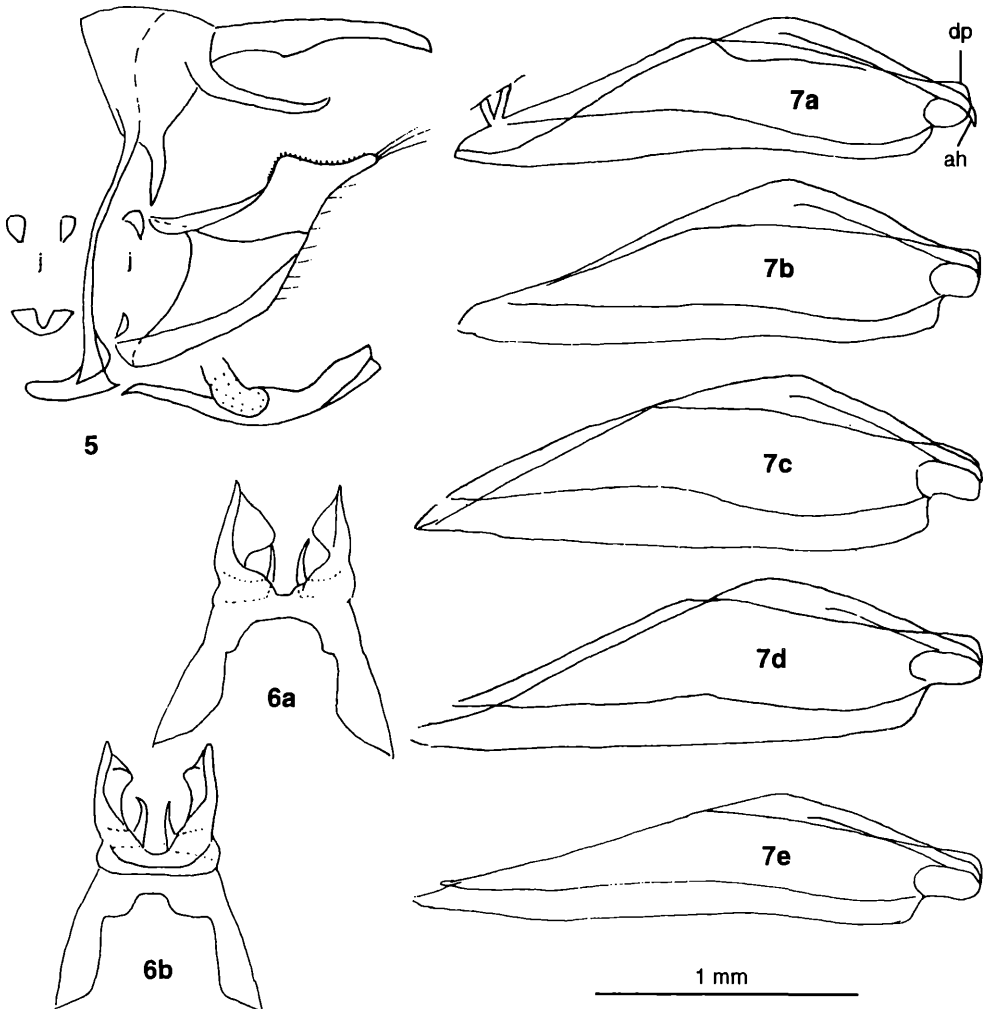


Fig. 5: Male genitalia of *A. waltoni pseudonitida*.

Fig. 6: Tegumen in dorsal view; a – *P. stoliczkana*; b – all the other species of *Polyommatus* in Tibet.

Fig. 7: Valva in lateral view (dp: distal process; ah: apical hook); a – *P. stoliczkana*; b – *P. erotides*; c – *P. akmeicius*; d – *P. sarta laziensis*; e – *P. venus*.

Explanation of the colour plate:

Fig. 1: *Argestina waltoni pseudonitida*, upperside: a – paratype ♂ (Sangsang); b – allotype ♀ (Lazi); c – paratype ♂ (Sangsang); d – holotype ♂ (Lazi); e – paratype ♀ (Sangsang); f – paratype ♂ (Cuola Pass).

Fig. 2: *Argestina waltoni pseudonitida*, undersides of fig. 1.

Fig. 3: a – *Polyommatus sarta laziensis* holotype ♂; b – *P. sarta laziensis* paratype ♂; c – *P. erotides sichuanicus* (Gangga) ♂; d – *P. sarta laziensis* paratype ♀; e – *P. sarta laziensis* allotype ♀; f – *P. akmeicius* (Pome) ♂; g – *P. venus lhasana* (Lhasa) ♂; h – *P. venus lhasana* ♀; i – *P. akmeicius* (Pome) ♀.

Fig. 4: undersides of fig. 3.

1a	1b	4c	4f	4i
1c	1d	4b	4e	4h
1e	1f	4a	4d	4g
2a	2b	3c	3f	3i
2c	2d	3b	3e	3h
2e	2f	3a	3d	3g

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